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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,376	01/05/2004	Gerrit Willem Hiddingh	2	2650

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EXAMINER

VO, NGUYEN THANH

ART UNIT PAPER NUMBER

2618

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

**Office Action Summary**

Application No.

10/751,376

Applicant(s)

HIDDINK, GERRIT WILLEM

Examiner

Nguyen T. Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 16 November 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-11, 13-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 and 13-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 6-8, 10-11, 13-16, 18-19, 21-24 are rejected under 35 U.S.C. 102(b) as being anticipated by Crawford (US 2003/0002471 A1, cited by examiner).

As to claims 1, 13, 23, Crawford discloses a wireless communication device (see figure 1), comprising a plurality of antennas A1-A6; and a predictive antenna selector that evaluates a signal quality of each of said plurality of antennas of at least a portion of one prior frame and selects an antenna to communicate one or more frames based on said signal quality evaluation (see paragraphs [0049], [0079], [0180]).

As to claims 2, 14, see Crawford, paragraphs [0053], [0080].

As to claims 3, 15, see Crawford, paragraphs [0055], [0077], [0086].

As to claims 4, 6, 16, 24, see Crawford, paragraphs [0154]-[0156], [0163], [0165].

As to claims 7, 18, see Crawford, paragraph [0168].

As to claims 8, 10, 19, 21, see Crawford, paragraph [0053]; see also figure 5.

As to claims 11, 22, see Crawford, paragraph [0060].

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5, 9, 17, 20, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crawford.

As to claims 5, 17, 25, Crawford does disclose removing a given antenna from evaluation if the signal quality of the given antenna is below a signal quality of a remainder of the plurality antennas (i.e., removing worst quality antenna as disclosed at paragraphs [0154]-[0156], [0163], [0165]). Crawford, however, fails to disclose removing a given antenna from evaluation if the signal quality of the given antenna is below a signal quality of a remainder of the plurality antennas by a predefined amount as claimed. However, those skilled in the art would have recognized that the above difference would not render the claims patentable Crawford because it would merely depend on which conditions one would like to remove a given antenna from evaluation. In addition, the examiner takes Official Notice that such a teaching is known in the art as ***hysteresis technique*** (see also the present specification, page 7 lines 11-12).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Crawford as claimed, such that a given antenna is removed from evaluation if the signal quality of the given antenna is below a signal quality of a remainder of the plurality antennas by a predefined amount, in order to avoid ping-pong

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or bouncing effect (i.e., a worst quality antenna becomes a better quality antenna in a very short period of time).

As to claims 9, 20, Crawford fails to disclose evaluating signal quality of each antenna in a random order as claimed. Those skilled in the art, however, would have appreciated that the above claimed limitations would not render the claims patentable over Crawford, because it would merely depend on which antennas are evaluated first, second and so on. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Crawford as claimed, in order to provide flexibility on the order of evaluating the plural antennas.

### ***Response to Arguments***

5. Applicant's arguments with respect to claims 1-11, 13-25 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nguyen T. Vo whose telephone number is (571) 272-7901. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Urban can be reached on (571)272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nguyen Vo



1-13-2007

**NGUYENT.VO  
PRIMARY EXAMINER**